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UNITED STATES DEPARTMENT OF AGRICULTURE
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THE POSITION OF AMERICAN COTTON AND THE AMERICAN COTTON PRODUCER

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Our subject should perhaps be considered mainly from two standpoints: (1) The present position, and (2) The outlook in respect to its probable future position. The latter is no doubt of more interest and importance, but one would indeed be bold to venture very far into the realm of prediction. Therefore, the greater part of this statement is confined to a discussion of the current situation and some of the factors that have contributed to it. Some mention will be made, however, of the factors that may have an important bearing on the outlook for the next several years.

Current Position Described

All State and Federal agencies working in the interest of the farmer are concerned with improving his present and future economic and social well-being, but comparatively little attention has been given to the question of how the producer's position at a given time may be satisfactorily measured. For this reason, perhaps more than for any other, data are not available whereby the farmer's well-being at one time may be compared adequately and accurately with that of another period or with other social groups. This is particularly true with reference to the various types of farmers and the farmers in different States or regions.

In the case of the cotton farmer, the data most frequently used in referring to his position are (1) cotton prices and (2) gross income from cotton. Undoubtedly you all know that in 1931-32 and 1932-33 farmers received 5.7 and 6.5 cents per pound, respectively for cotton; that last season the average price received by producers was 12.4 cents; and that this season prices have been nearly twice as high as in 1931-32. Many of you may also know that in 1932-33 the gross income from cotton and cottonseed amounted to only $464,000,000, whereas the total farm income from the 1934-35 cotton crop, including rental and benefit payments, amounted to $822,000,000, an increase of 77 percent over 1932-33. Although such comparisons as these are useful, they do not satisfactorily indicate the cotton farmer's economic position. The reasons are obvious. For instance, price means little to the farmers who, like many of those in western Texas in 1934, have little or no cotton to sell,

and whose welfare depends upon changes in production and living costs just as much as upon a change in income.

Within the last few years some thought has been given to the problem of finding more adequate methods of indicating the condition of agriculture in general and to some extent the conditions of the different types of farmers. In the issues of The Agricultural Situation for February 1935 and February 1936, a monthly printed publication of the Bureau of Agricultural Economics, L. H. Bean discussed in considerable detail several methods of measuring "agricultural well-being in the aggregate." In addition, Mr. Bean had given a comparison of several methods of measuring the cotton farmer's economic position, in a mimeographed pamphlet released last August.

The "parity price" measure is the one we have heard most about during the last 3 years, as it was included in the Agricultural Adjustment Act. "Parity price" as you know, is, that price which will enable farmers to buy as much of the things they usually buy with a pound of cotton as they could have bought during the 5 years, 1910-14. Although this measure of the economic welfare of the farmer is generally admitted to be unsatisfactory, its common usage warrants its consideration in connection with the problem of determining the present position of the American cotton producer. It is certainly more satisfactory for the purpose than is cotton price alone.

On February 15, 1936 the average price received by American farmers for lint cotton was 11.0 cents per pound. During the 5-year pre-war base period, the average price received by producers was 12.4, which was 13 percent higher than the February 15, 1936 price. If the prices of the things farmers buy had been the same during February 1936 as during the 5 years, 1910-14, the so-called "parity price" in February would have been 12.4 cents. However, the index number of prices of things farmers buy, and interest and taxes, was 26 percent higher in February than in the pre-war period. Consequently, the "parity price" in February was 26 percent greater than the 12.4 cent pre-war average, or 15.6 cents. The market price received by producers in February, therefore, was approximately 29 percent less than parity.

For the first 7 months of the current marketing season, the market price received by producers in the United States for their cotton also averaged 29 percent below parity. In these calculations, however, one should include the payments farmer's received from the Government for cooperating in the cotton adjustment program. It is estimated that cooperating farmers will receive, this season, the equivalent of about 0.9 cent per pound for their cotton in the form of parity payments and the equivalent of about 2.5 cents in rental and benefit payments. This 3.4 cents, plus the average price received so far this season of about 11.1 cents, gives cooperating producers, who produced about 90 percent of the 1935 crop, the equivalent of about 14.5 cents. This is only 7 percent below parity.

On the other hand, the farm price of cottonseed during the first half of the current season averaged approximately 12 percent above parity. In 1932-33 prices received by cotton farmers for lint averaged 58 percent below the "parity price" and the price of cottonseed was 62 percent below parity. The "parity price" measure of the welfare of cotton farmers, therefore,

indicates that the cotton farmer's present economic position (insofar as it is determined by cotton and cottonseed prices) is much better than in 1932-33 and that the returns per unit of production to cooperating producers were almost equivalent to the pre-war parity price.

There are several reasons why this method of measuring or determining the farmer's welfare is not satisfactory. One of the most important is the fact that it does not take into account the changes in the volume of production. For this reason income adjusted for changes in interest, taxes, and the prices of things farmers buy is a much more satisfactory measure but it is by no means entirely satisfactory.

As already indicated, the prices received by cooperating cotton producers so far this season for lint cotton plus the price equivalent of the Government payments were only about 7 percent below the "price parity" and the prices received for cottonseed were 12 percent above parity. However, it is estimated that the purchasing power of the gross income from cotton and cottonseed, including Government payments, this season (1935-36) will be nearly one-fourth less than in the pre-war period. In other words although cotton and cottonseed prices adjusted for changes in the prices paid by farmers for goods and services, indicate that the cotton farmer's position is about as satisfactory as before the World War, income from cotton and cottonseed adjusted the same way indicates that he is not in nearly so satisfactory a position as in the pre-war period.

The reason for the rather marked discrepancy between the cotton farmer's present economic position, as indicated by these two measures, becomes apparent immediately when the volume of cotton the farmer had to sell this season is compared with the average quantity sold by producers in the pre-war period. In the 5 years, 1909-10 to 1913-14, the crop averaged 13,000,000 bales which was nearly one-fourth larger than the current crop. This income measure also indicates that the cotton farmer's economic position has been greatly improved since 1932-33 when the total gross income from cotton and cottonseed was 55 percent below the income adjusted for changes in purchasing power but it does not indicate nearly so much improvement as the "parity price" yardstick.

Although income adjusted for changes in purchasing power takes into account changes in volume of production and is unquestionably a more desirable means of indicating the farmer's well-being than is "parity price", several criticisms might be made of this use of it. Among them may be included the fact that it does not take into account changes in costs of production or changes in the number of persons engaged in producing the crop. In addition, it indicates only how the purchasing power of the total gross farm income from cotton and cottonseed at a given time compares with that of another time. It does not in any way indicate how the cotton farmer's position compares with that of other farmers or with nonagricultural groups. By using Census data of the number of farms producing cotton in 1909 and 1934 it has been possible to compare roughly the average per-farm purchasing power of the gross income from cotton in the pre-war period and the current year. This comparison indicates that in terms of the purchasing power of his income from cotton, including Government Payments, the average cotton farmer in 1935-36 was not so well off by more than 30 percent as in the pre-war period. In other words the average cotton farmer today can buy with

his gross returns from cotton, a little less than 70 percent of the usual goods and services he could buy in 1909-13. However, assuming the same number of farmers this year as in 1932-33, the average farmer's gross returns from cotton in 1935-36 would buy about 70 percent more than in 1932-33.

In addition to these criticisms of the above methods used in appraising the cotton farmer's present position, it should be pointed out that none of them take into account changes in the quantity or quality of goods and services purchased, changes in cash incomes from other farm enterprises, changes in the quantity of food and feed grown for use on the farm, or changes in the costs of production.

Although it is true that the available data do not permit us to measure the cotton farmer's economic position in a way that is entirely satisfactory, there seems to be little doubt but that his position is much better at the present time than it was in 1931-32 and 1932-33. On the other hand, the best measures available indicate that cotton producers are not nearly so well off now as in the 5 years immediately preceding the World War.

So much for the present position of the American cotton producer. Let us now turn to a consideration of the position of American cotton, particularly as it concerns the American producer's welfare.

At the beginning of the current (1935-36) cotton-marketing season, there was in stock throughout the world approximately 9,000,000 bales of American cotton which, together with the 10,700,000 bales produced, gave a supply for the season of 19,700,000 bales. This is about 500,000 bales less than the world supply of American cotton last season (1934-35) and 6,300,000 bales or 24 percent less than the peak supply of 1931-32. With approximately 5,000,000 bales of spot cotton held directly or indirectly by the Government, the supply of free cotton this season is only a little over 14,500,000 bales. The average world supply of American cotton in the 10 years ended 1932-33 was 20,400,000 bales. (Fig. 1)

The comparatively small supply of American cotton readily available has been an important factor causing spot prices to be unusually high relative to futures again this season. But despite this situation, spot prices of American cotton have been lower relative to most foreign growths than in the previous 2 seasons and exports and foreign consumption have been above the unusually low level of last season. In fact, exports during the first 6 months of the season were nearly 40 percent above those of the 6 months ended January 1935. In January and February, however, exports were only 10 percent above those 2 months last year and were 35 percent below the average for the 2 months in the 10 years ended 1933.

World consumption of American cotton during the first half of this season amounted to 6,150,000 bales according to the New York Cotton Exchange Service. This was 9 percent above the same period a year earlier. If consumption during the last half of the season should equal that of the first half, world consumption for the season would total 12,300,000 bales and the world carry-over would be reduced to less than 7,500,000 bales. If consumption runs that high and none of the present Government-financed

stocks are sold or exchanged, it seems probable that spinners will find it extremely difficult to obtain the qualities desired.

Last season the world consumption of American cotton amounted to 11,350,000 bales. This was 2,200,000 bales below the previous season and was about 2,100,000 bales below average. Mill consumption of foreign cotton, on the other hand, was approximately 2,300,000 bales above the previous season, 3,155,000 bales above the average for the 10 years ended 1932-33, and 1,000,000 bales larger than the consumption of American. In the 10 years ended 1932-33, mill consumption of American cotton exceeded that of foreign growths by approximately 4,260,000 bales. The indications now are that the consumption of American will not lose any further ground relative to foreign growths this season and may show some relative gain as compared with last season.

Although the world supply of American cotton this season is below the average for the 10 years ended 1932-33, the carry-over last August 1 was about 3,000,000 bales larger than the 10-year average carry-over. Consequently, the quantity of cotton that farmers have to sell this season is much smaller than the average in the above 10-year period. In December, the Crop Reporting Board estimated the 1935-36 crop at 10,734,000 bales. This is 1,100,000 bales larger than the 1934 crop but with that exception is the smallest since 1923-24 and is 3,680,000 bales smaller than the 10-year average production.

In contrast to this situation in respect to American cotton, we find that cotton production in foreign countries for the current season is now expected to total about 15,266,000 bales, exceeding the record crop of last season by about 9 percent and the average for the 10 years ended 1932-33 by about 4,000,000 bales, or 36 percent. This estimated total foreign crop for the 1935-36 season is 4,500,000 bales or 42 percent larger than the current American crop whereas in the above 10 years the foreign crop averaged 22 percent or 3,200,000 bales, less than domestic production. Production in most foreign countries this season is higher than the 10-year average and in many countries has reached a new high level. However, foreign production, exclusive of Russia, where the cotton acreage has been controlled largely by the Government, is now expected to be slightly less this season than in 1934-35. Part of this reduction is due to unusually bad weather which is responsible for a reduction of more than 600,000 bales in China.

Because of a substantially smaller carry-over, the total supply of foreign cotton this season (1935-36) is slightly less than last season's record supply, but relative to the 10-year average is even larger than production. It is about the same size as the supply of American cotton although the carry-over of foreign cotton at the beginning of the season was only one-half as large as the carry-over of American.

The total area in cotton in foreign countries for the current crop year is now tentatively estimated at 48,669,000 acres. This is 4 percent larger than the present estimate of the 1934-35 acreage which was, until this season, the largest in history. Foreign acreage, exclusive of Russia, is estimated at 5 percent above 1934-35 and 16 percent above the 10-year (1923-24 to 1932-33) average. As in the case of production, acreage increases in the last 2 or 3 years have been general throughout most of the cotton-producing countries.

Domestic cotton prices during the first 7 months of the current season averaged considerably lower than in the same period last season. Middling 7/8 inch, in the 10 markets averaged 11.32 cents from August through February 1935-36 compared with 12.64 cents in the same period last season. The 10-market average price advanced from the low point of 10.35 cents in mid-September, to 12.21 cents on November 21, but has since declined to a level just slightly above 11 cents. In Liverpool, American Middling 7/8 inch cotton, in cents per pound, in the 7 months from August to February this season was of course lower than a year earlier by about the same amount as were domestic prices. In the 6 months, August to January, the average ratio of the Liverpool price of three types of Indian to the price of American Middling and Low Middling was .81 approximately the 10-year average. In the same 6 months last season the ratio averaged 68. The price of Egyptian Uppers at Liverpool averaged 115 percent of the price of American Middling during the first half of the present season compared with 106 in the same period a year earlier and an average of 126 percent for the 10 years ended 1932-33. Most other foreign growths have also been higher relative to American this season than in the past 2 seasons. (Fig. 2)

Factors Contributing to Present Position of American Cotton and the American Cotton Producer

Many factors have contributed to the above conditions in respect to American cotton and the American cotton producer. Most of these have been mentioned many times and on many occasions in the last few years. The most important single factor that has affected conditions in the last several years is the economic depression with all of the elements that were responsible for it. Economists and others have spent much time in debating the question of the factors responsible for the depression and many articles and books have been written on the problem. Consequently, no attempt is here made to segregate those factors that may have contributed to the depression from those that may have grown out of the depression. Regardless of what caused the depression, the fact remains that, had industrial employment and pay rolls and business conditions in general both at home and abroad remained as high as they were in 1928 and 1929, conditions in the cotton industry during the last few years would have been very different. With the decline in employment and in consumer incomes, cotton consumption declined to very low levels and, since cotton production did not decline proportionately, cotton prices dropped to the lowest levels in several decades.

The return of laborers to farms from industrial centers, the marked decline in the prices of alternative products, and the unusually high yields were important elements preventing domestic cotton producers from reducing their cotton production more nearly in line with the decline in demand. In 1931 and 1932 the average acreage harvested by cotton producers was 14 percent less than the acreage harvested in 1929 and 16 percent below the peak acreage in 1926, but yields averaged 21 percent higher than for the preceding 10 years. By 1933, readjustments in costs, increased labor supplies, and the lack of more remunerative commercial farm alternatives resulted in an increase of about 12 percent in the acreage planted. The cotton farmer had turned to other crops to a rather significant extent during the 3 previous years, but, in general, found these crops to be even

less satisfactory than cotton. Even when the price of cotton was 5 cents per pound, the crop brought most farmers a little cash above their out-of-pocket expenses. This was not true of most of the other crop or livestock enterprises to which they could readily turn.

In connection with the comparative advantages of cotton and other farm enterprises in the Cotton Belt a recent mimeographed report pertaining to the World Cotton Situation prepared by the Bureau of Agricultural Economics contains some very useful information. On the basis of average yields, average farm prices, and average costs other than labor, during the 10 years ended 1932, it was found that, of the four crops most extensively grown in the Cotton Belt (cotton, corn, wheat, and oats) representing more than 75 percent of total crop acreage in the 10 principal cotton-producing States, the average returns to labor from cotton were approximately 3 to 5 times as great per hour of labor as the returns from corn, wheat, and oats. The returns to labor per acre in cotton averaged approximately 7 to 20 times as much as the returns to labor per acre in these three grain crops. It was pointed out that in certain relatively small areas the returns from crops such as tobacco, sugar cane, rice, and fruit and truck crops, exceeded those from cotton but, owing to limited markets or to the soil and climatic requirements of these crops they do not offer a promising alternative for the use of any substantial portion of the acreage normally devoted to cotton production.

In a summary of the livestock possibilities in the South the following statement was made: "Returns from commercial livestock in the Cotton Belt are generally considerably smaller than from cotton on account of the low yields of feed crops and the inadequacy of pastures in most areas. On the basis of average yields and prices during the 10 years ended 1932, it is estimated that an average of from about 2 to 9 times as many acres in crop land and improved pastures was required to produce $100 worth of dairy, beef cattle, and hog products as was required to produce $100 worth of cotton. The acreage requirements for poultry were not so great as in the case of these other classes of livestock, but were 50 percent greater than for cotton". (Note tables 1 and 2, pages 12 and 13).

As a somewhat similar situation undoubtedly existed in many foreign countries; many foreign producers apparently found cotton more profitable or less unprofitable than other alternatives. Correlation analyses have been made for several of the important foreign producing countries showing the relation between the acreage in cotton and the price of cotton and the price of one or more important alternatives. They show very clearly that cotton producers in foreign countries turned to other crops when price relationships were such that it was advisable, but cotton prices in most foreign countries have been relatively higher than the prices of many of the crops alternative to cotton. This has been a rather significant factor during the last few years, in preventing a better adjustment of cotton supplies to the reduced demand.

It should be pointed out that an important factor preventing cotton prices in many foreign countries from falling considerably lower after 1929 than they actually did was the depreciation in the currencies of these countries. China's currency began declining in 1928 and the Brazilian milreis in 1929-30, and by the middle of 1931 their gold values were only

about one-half what they were in the crop year 1927-28. The Indian rupee and the Egyptian pound were both tied to the British pound and did not drop in terms of gold or foreign exchange until September 1931, but by December that year each was worth only 70 percent of its previous value. These depreciations occurred much earlier than the depreciation in the dollar and in the case of the Brazilian and Chinese currencies the decline was much greater. Similar developments also occurred in other countries. This tended to prevent cotton prices in these countries from falling as low as cotton prices in this country, which in turn tended to keep foreign cotton acreage from declining as much as the acreage in the United States. (Figs. 3 and 4.) (For additional discussions of foreign acreage and production see the mimeographed report on Foreign Cotton Production released by the Bureau of Agricultural Economics in April 1935).

Other unfavorable factors that have had an important bearing on the cotton situation and the economic position of domestic producers during recent years include: (1) Increasing nationalism in many countries and the developments associated with it, (2) increasing industrialization in the Orient, a part of which seems to be entirely unrelated to nationalism, (3) style changes and increased competition from other textile materials. Although some or possibly all of these contributed to or were in turn aggravated by the depression, it is believed that each should be given some separate consideration. Only a few developments as a result of these nationalistic tendencies as they have affected cotton are discussed here since those tendencies form the theme of another address on this program.

One of the factors mentioned frequently in this connection during the last few years is our own tariff policy here in the United States. It has been stated on many occasions that increased domestic duties on foreign imports, which constitute the principal means of paying for goods purchased from the United States, have made it difficult for foreign countries to pay for large quantities of American cotton in the last several years. There is little question but that this has had a significant bearing on the cotton situation during recent years. As a result of the increased tariffs, the depression, and the decline in commodity prices, merchandise imports into the United States from foreign countries declined 70 percent in value from 1929 to 1932 and even in 1935 they were still 53 percent less than in 1929. In terms of volume, merchandise imports in 1932 were 40 percent less than in 1929 and in 1935, 19 percent less.

In addition to this phase of the influence of our tariff policy on the cotton farmer's well-being, the high domestic tariff increases his living and production costs. Undoubtedly the tariff, accounts in part for the fact that the index of the prices paid by farmers for the things purchased and for interest and taxes was 26 percent higher in February 1935 than in the 5 years, 1910-14.

Until the last few years there were comparatively few trade restrictions applying directly to cotton and many of those that did exist were not very effective and were not particularly significant. Most of the import duties in countries that import cotton are still comparatively unimportant but this is true, no doubt, only because the principal cotton-consuming countries either do not have adequate soil and climatic conditions well adapted to the production of cotton or are exporting cotton in such quantities that a protective duty is or would be practically ineffective.

One of the most important developments in this connection in the last few years are the direct restrictions that have been applied to cotton as a result of unfavorable trade balances and exchange difficulties due at least in part to increasing nationalism throughout the world. This situation has been particularly pronounced in Germany and Italy. The latest development in Germany is a decree which definitely fixes the quantity of cotton a mill can consume and therefore import. Last season the hours of operations in the mills were shortened and this together with the exchange regulations and barter transactions with other countries resulted in Germany consuming only 450,000 bales of American cotton compared with about 1,000,000 the season before.

Although even up to the present time, a substantial proportion of the exports of American cotton has not been directly affected by import duties on raw cotton, many countries now have duties on cotton, most of which are comparatively small. China, ranking sixth as an export market for American cotton during the 5 years ended 1933-34 and third as a producer of cotton during this period, has a tariff amounting to about 1.75 cents per pound. This duty probably affects the price of those qualities of Chinese cotton that are more directly competitive with American cotton but for the shortest staples, which China exports in considerable quantities, this duty would obviously be ineffective as a price factor. Many other cotton-producing countries, such as India, Brazil, Peru, and Mexico, also have tariffs on raw cotton, presumably as protective measures, although they are on an export basis for cotton.

In addition to protective tariffs, some countries havetariffs on cotton that are apparently intended mainly for revenue. Italy has duties and taxes on cotton equivalent to about 4.2 cents per pound and Spain has a duty equal to more than 1.1 cents per pound. A small part of the proceeds from the Italian duty is used to finance an association of cotton-yarn spinners. Part of the Spanish duty is used for this purpose and part for increasing the production of cotton in Spain. Duties of this type tend to decrease cotton consumption by raising the cost of cotton goods to consumers but in some instances may stimulate cotton production by providing funds for financing organizations that promote cotton production or by raising the prices received by producers.

Most foreign governments that have suitable territory available appear to be anxious to encourage their domestic production of cotton. For many years the British Government and British cotton manufacturers have been trying to stimulate cotton growing in new areas, particularly in suitable regions of the British Empire. Although these efforts have been financed by the Government in some instances, and have been followed by substantial increases in the production of cotton in certain sections of the British Empire, they have not been sufficiently successful to prompt the British Government to place an import duty on cotton from foreign countries. Japan is encouraging cotton production in Chosen and Manchuria, but the possibility of profitable cotton growing in these regions would seem to be distinctly limited by a short growing season and the competition of other crops for the available land. There has been some effort on the part of the cotton-consuming countries to encourage cotton production in South America. Countries of continental Europe that are encouraging cotton production in colonial possessions include France, Italy, and Belgium. On the whole, the efforts of foreign Governments have met with comparatively little success in

promoting foreign cotton production in comparison with stated expectations. Nevertheless, the total increase in cotton production arising directly or indirectly out of these efforts has been of some significance as a part of the general increase in foreigh cotton production during the post-war period.

Foreign trade restrictions on cotton textiles have been of more significance as related to American cotton than have the foreign trade restrictions on raw cotton. These measures are so numerous and complicated that a detailed discussion of them here is impracticable. The extent to which restrictions on cotton textiles have affected the foreign outlets for American cotton is not apparent, but it seems probable that they, in common with trade restrictions generally, have adversely affected the foreign markets for cotton by depressing certain foreign cotton industries, by increasing costs of cotton goods to consumers, and by causing shifts in the quality and kind of cotton used by the spinners.

Textile industries in India, China, and Brazil have developed under the protection of tariffs on textiles. These industries, consuming mainly native-grown cotton, have competed with cotton-textile industries in European countries, particularly in the United Kingdom, which consume a comparatively large proportion of American cotton. It is to be expected that the continuation of the growth of cotton-textile manufacturing industries in foreign cotton-producing countries will lessen the foreign outlets for American cotton to the extent that imported goods made from American cotton are replaced by domestic products made from other growths.

This latter point is closely associated with the increasing industrialization in the Orient. In addition to the increases due to nationalism there has undboutedly been a substantial increase, particularly in Japan, that is entirely separate from this movement. This increase is apparently due to the large supply of cheap labor, new and efficient machinery good management, and proximity to raw material. Cotton consumption in Japan showed a substantial increase in each of the last 4 seasons and in 1934-35 was 28 percent higher than in 1929-30 and 84 percent higher than in 1920-21. This is a continuation of the rather marked upward trend that has been under way in Japan for the last several decades. The increasing consumption in Japan during the depression, while consumption in most other countries was declining, resulted in Japan manufacturing a much larger proportion of the total cotton manufactured in the world than was true in earlier years. The significance of this from the standpoint of American cotton is that a considerable quantity of the cotton goods now being produced in Japan has apparently displaced cotton textiles formerly produced in Great Britain and Continental Europe. This shift has probably tended to reduce the price of American cotton somewhat, as compared with the price that might have prevailed if European mills had continued to manufacture as large a proportion of the total world consumption as before the World War.

Style changes and increased competition from other textile materials have also contributed to the present cotton situation. We do not know just how significant it is, but we all know that many of us wear considerably fewer cotton garments than before the World War and that many of the garments worn, especially by the women, contain considerably less cloth. In the

5 years ended 1909-10 the average domestic mill consumption of cotton per capita was 36.3 pounds, whereas in the 5 years ended 1930-31, a period in which business activity was both high and low, it was 26.2 pounds. In this latter period, however, a much larger proportion of the raw cotton and cotton textiles was used for industrial purposes than in the earlier period. It is estimated that on the average the equivalent of 3.2 pounds of cotton per capita was used in the production of automobiles and casings in the latter period whereas in the earlier period practically no cotton was used for such purposes. Style changes and the question of increased competition from other textile materials are closely associated. Some of us in the Bureau of Agricultural Economics are now trying to get some rough measure of the extent of this competition between cotton and other fibers. We hope to deal with the results of our findings in considerable detail in a forthcoming report. It might be said now, however, that rayon consumption in the United States within a period of 25 years has increased from almost nothing to about 250,000,000 pounds, and marked increases have also occurred in many foreign countries. In 1934 the world production of rayon was 775,000,000 pounds, equivalent on a pound-per-pound basis to 1,600,000 bales of cotton. Rayon production had apparently increased to a still higher level in 1935. From 1910 to 1914 the average world production of rayon amounted to 20,000,000 pounds, the equivalent of only 40,000 bales of cotton.

The question of the outlook for American cotton and the American cotton producer takes one into the realm of predictions which I should like to avoid. However, it seems probable that the new program which is being launched at Memphis should help the producer to lower his production costs and improve the spinning qualities of his cotton. Both of these should help American cotton and the American producer, from the standpoint of competition from foreign cotton as well as from other textile materials. In addition to these factors, we know that business conditions are improving throughout the world and efforts are being made to reduce trade restrictions. The extent to which business activity is likely to increase further during the next few years is problematical, but we do know that in the past we have come out of each depression and that general business conditions have continued until they have exceeded any previous level. Should this occur in the next few years, it would materially benefit the position of American cotton and the cotton farmer's economic position and well-being.

Table 1.-Estimated gross value per acre; gross costs per acre other than labor; returns to labor; average quantity of man labor required per acre for growing, harvesting, and marketing specified crops, and the relative importance of these crops in the 10 leading cotton-producing states
(Average 1923-32)

Crops	Acreage harvested	Percentage of total acreage in crops 1/	Gross value per acre 2/	Costs per acre other than labor 3/	Return to labor after deducting other costs: Per acre	Per hour of man labor	Hours of man labor per acre	Estimated number of hours labor used in producing each crop
	1,000 acres	Percent	Dollars	Dollars	Dollars	Cents	Hours	Million hours
Cotton	39,444	40.6	30.82	17.28	13.54	15.9	85	3,353
Corn 4/	25,823	26.8	14.60	12.60	2.00	5.4	37	955
Tobacco 5/	916	.9	121.94	52.40	69.54	17.4	400	368
Wheat 6/	8,371	8.6	15.14	14.44	.70	3.5	20	167
Oats 7/	1,312	1.3	11.57	10.92	.65	4.3	15	20
Total of 5 crops	75,866	78.0						
All hay	6,257	6.4	13.96	8/	8/	8/	16	100
Peanuts 9/	1,472	1.5	35.00	8/	8/	8/	67	99
Sweetpotatoes	553	.6	93.01	8/	8/	8/	120	66
Potatoes	325	.3	112.33	8/	8/	8/	80	26
Total of 9 crops	84,473	86.8						

Acreage and value-per-acre data computed from records in the Division of Crop and Livestock Estimates. Costs, hours of labor per acre, and returns to labor computed from data gathered by the Division of Farm Management and Costs.

1/ Estimated average acreage in all crops including double-cropped acreage, acreage in bearing and nonbearing orchards, and acreage in vegetable gardens.

2/ Gross value per acre for cotton includes lint and seed; for corn, grain and stover; for wheat and oats, grain and straw; for peanuts, nuts and hay, or straw. Based on average yields and weighted average farm price for each state.

3/ Includes charges for fertilizer and other materials, horse and tractor work, other power, machinery and equipment, land rent, and miscellaneous items.

4/ Acreage figure is for corn for all purposes. Costs and returns are for corn harvested for grain.

5/ Tobacco acreage is the total for all types produced in the 10 states. Costs and returns apply to flue-cured tobacco grown in North Carolina, South Carolina, and Georgia. The acreage of this tobacco in these States was 86 percent of the total acreage of all tobacco in the 10 states.

6/ The acreage figure is a yearly average for the 10 states. The costs and returns are based on the total wheat grown for grain, exclusive of Oklahoma and Texas. In Oklahoma and Texas, the bulk of wheat is produced in noncotton-producing areas. There were 885,000 acres in wheat in the eight states, which was 11 percent of the total wheat acreage of the 10 states.

7/ Costs and returns are for oats harvested for grain.

8/ Not available.

9/ Returns and labor requirements are for peanuts harvested for nuts. The acreage figure is for peanuts for all purposes if planted solid. Of the total peanut acreage, 67 percent was harvested for nuts.

Table 2.-Estimated amount of improved pasture and crop land required for producing $100 worth of products from different livestock enterprises and cotton and the estimated gross value per acre of livestock and cotton and the quantity of labor utilized for producing cotton and livestock in eight of the principal cotton states 1/

Item	Crop and pasture land needed to produce $100 worth of products 2/			Gross value of products per acre	Man labor required per acre of land used 3/
	Crop land	Improved pasture land	Total		
	Acres	Acres	Acres	Dollars	Hours
Dairy cattle, (sour cream basis)	3.6	3.6	7.2	13.90	35.0
Dairy cattle, (fluid milk basis)	2.3	2.3	4.6	21.75	39.0
Poultry, (egg production)	3.5	.3	3.8	26.30	53.0
Beef cattle, (grass finish)	6.3	16.9	23.2	4.30	13.0
Hogs, (corn finish)	6.1	1.2	7.3	13.70	40.0
Cotton	2.8	---	2.8	36.25	112.0

1/ The eight cotton States included in the above results are North Carolina, South Carolina, Georgia, Alabama, Tennessee, Mississippi, Louisiana, and Arkansas. Oklahoma and Texas were excluded because in each of these States, the principal livestock producing areas are to a considerable extent, non-cotton-producing areas.

2/ In calculating the quantity of products produced, it was assumed that the different crops would return a yield equal to the average yield reported for the period 1923-32. The value was calculated by multiplying the estimated production of livestock and products for the indicated livestock enterprises by the average farm price reported for the eight States, for the period 1923-32. The value shown includes all livestock and products sold or traded, used on the farms, and an estimated value to the farmer for the manure produced For cotton, the gross value is the annual average value of lint and seed, 1923-32. For tobacco, values are based on returns from flue-cured in North Carolina, South Carolina, and Georgia, 1923-32.

3/ Includes labor for caring for livestock and for producing feed and pasture crops used by livestock. For cotton, the labor figure is the annual average, 1928-32. For tobacco, the quantity of labor per acre is the estimated annual average for flue-cured in North Carolina, South Carolina, and Georgia.

Production, World Consumption, World Carryover and Price of American Cotton

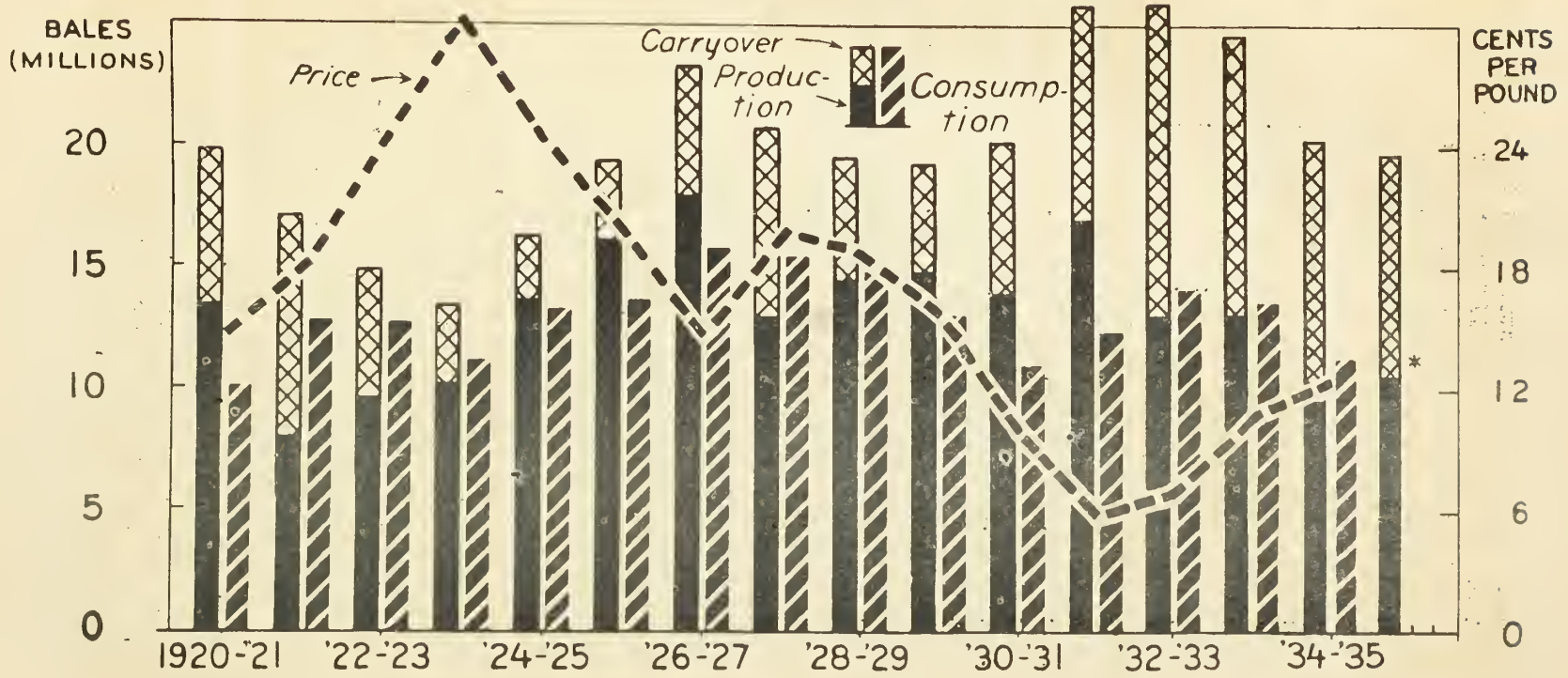

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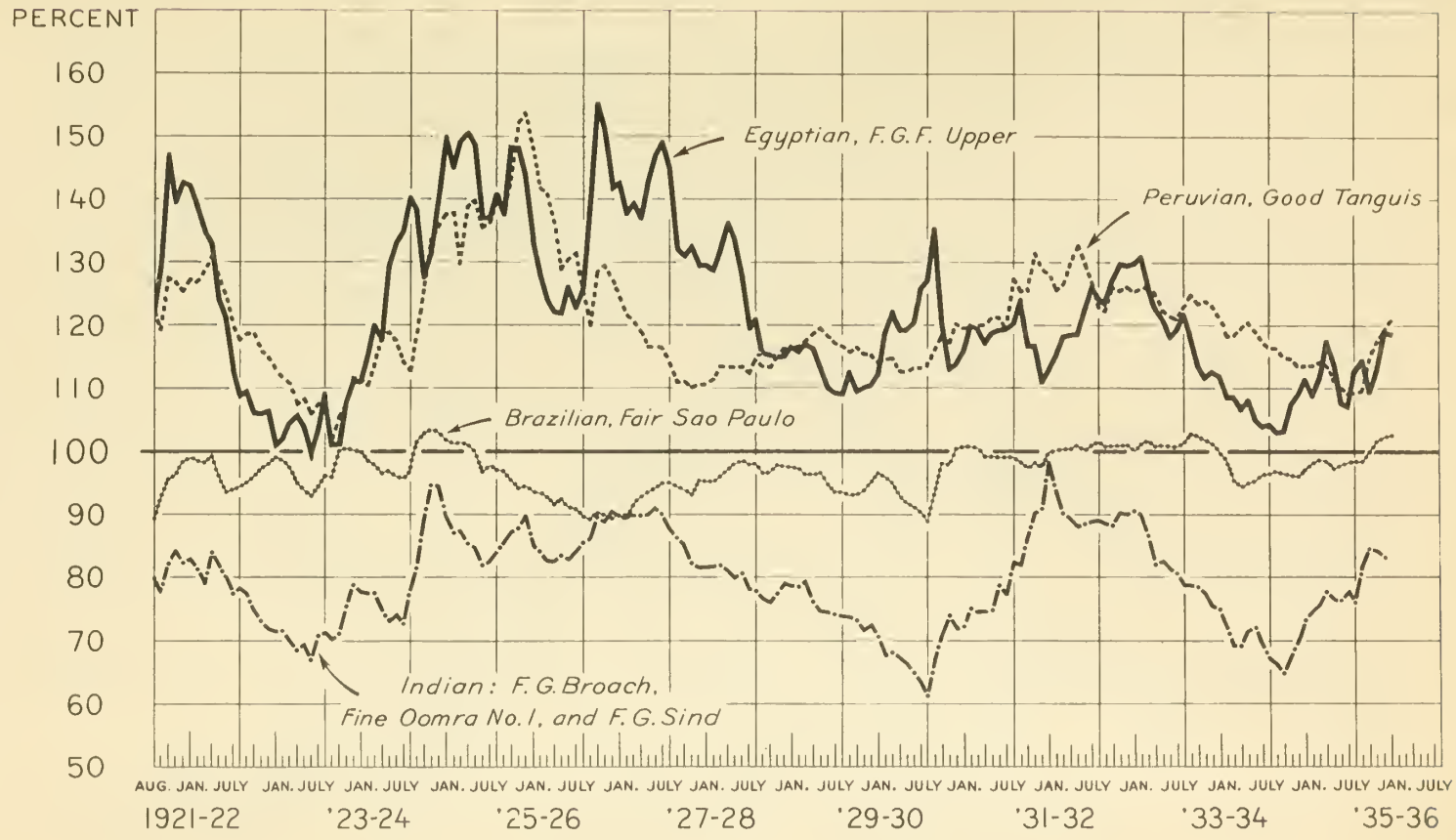
FIGURE 1.- NOTWITHSTANDING A DECLINE OF ABOUT 2,200,000 BALES IN THE WORLD CONSUMPTION OF AMERICAN COTTON IN 1934-35, THE WORLD CARRY-OVER WAS REDUCED CONSIDERABLY BECAUSE OF THE VERY SMALL CROP. ALTHOUGH THE 1935 CROP IS ABOUT 1,500,000 BALES LARGER THAN THE PRECEDING CROP, THE WORLD SUPPLY OF AMERICAN COTTON FOR THE 1935-36 SEASON IS SLIGHTLY LESS THAN WAS THE SUPPLY THE PREVIOUS SEASON, AND IS APPROXIMATELY THE SAME AS THE AVERAGE FOR THE 10 YEARS ENDED 1932-33.

COTTON: PRICES OF EGYPTIAN, INDIAN, PERUVIAN, AND BRAZILIAN, EXPRESSED AS PERCENTAGES OF AMERICAN,* LIVERPOOL, 1921-22 TO DATE



* AMERICAN MIDDLING, EXCEPT INDIAN, WHICH IS MIDDLING AND LOW MIDDLING

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FIGURE 2.- BECAUSE OF DIFFERENCES IN QUALITY, EGYPTIAN AND PERUVIAN COTTONS USUALLY BRING A HIGHER PRICE THAN 7/8-INCH AMERICAN; INDIAN USUALLY BRINGS A LOWER PRICE; AND BRAZILIAN AND SAO PAULO FAIR (ONE OF THE IMPORTANT TYPES OF BRAZILIAN COTTON), BRING A PRICE NOT GREATLY DIFFERENT FROM AMERICAN. OVER SHORT PERIODS, HOWEVER, THE PRICES OF DIFFERENT COTTONS IN A GIVEN MARKET MAY VARY MATERIALLY DEPENDING UPON THE SUPPLY OF AND DEMAND FOR A PARTICULAR KIND AT THE TIME. DURING 1933-34 AND 1934-35, AMERICAN COTTON WAS RELATIVELY HIGH COMPARED WITH MOST FOREIGN GROWTHS.

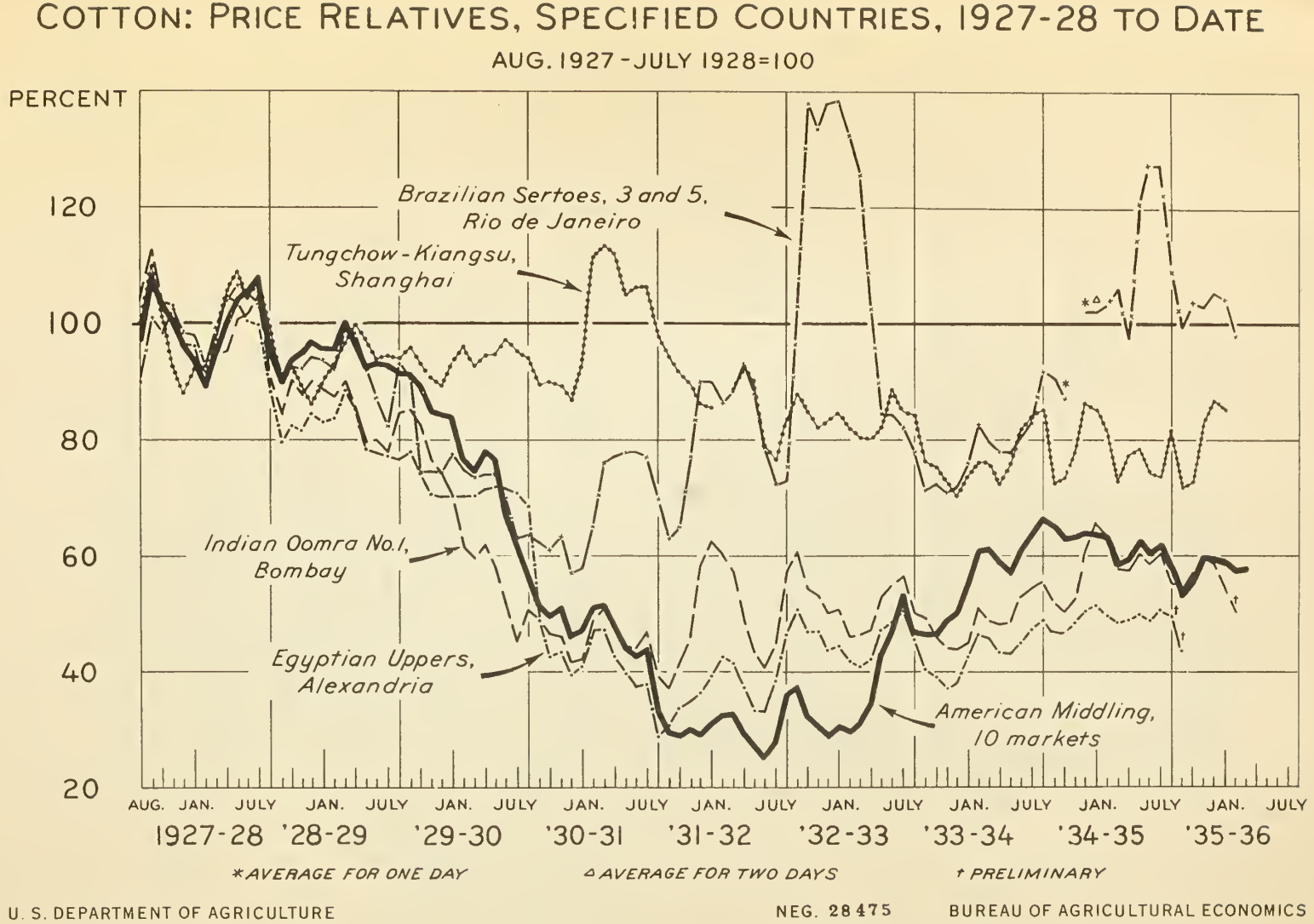
COTTON: PRICE RELATIVES, SPECIFIED COUNTRIES, 1927-28 TO DATE
AUG. 1927 - JULY 1928=100
PERCENT
120
100
80
60
40
20
Brazilian Sertoes, 3 and 5, Rio de Janeiro
Tungchow-Kiangsu, Shanghai
Indian Oomra No.1, Bombay
Egyptian Uppers, Alexandria
American Middling, 10 markets
AUG. JAN. JULY JAN. JULY JAN. JULY JAN. JULY JAN. JULY JAN. JULY JAN. JULY JAN. JULY JAN. JULY JAN. JULY
1927-28 '28-29 '29-30 '30-31 '31-32 '32-33 '33-34 '34-35 '35-36
*AVERAGE FOR ONE DAY
△AVERAGE FOR TWO DAYS
†PRELIMINARY
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FIGURE 3.- THE LEVEL OF COTTON PRICES WITHIN DIFFERENT COUNTRIES HAS VARIED MATERIALLY DURING THE LAST FEW YEARS, PARTLY BECAUSE OF CHANGES IN THE VALUE OF THE CURRENCY OF THE COUNTRY. IN 1931-32 AND 1932-33 COTTON PRICES IN THE IMPORTANT COTTON-EXPORTING COUNTRIES, IN TERMS OF THE CURRENCIES OF THOSE COUNTRIES, WERE RELATIVELY HIGHER THAN COTTON PRICES IN THE UNITED STATES. SINCE THEN, COTTON PRICES IN THE UNITED STATES HAVE RISEN RELATIVELY MORE THAN HAVE COTTON PRICES IN MOST FOREIGN COUNTRIES.

RELATIVE GOLD VALUES OF SPECIFIED CURRENCIES, 1927-28 TO DATE

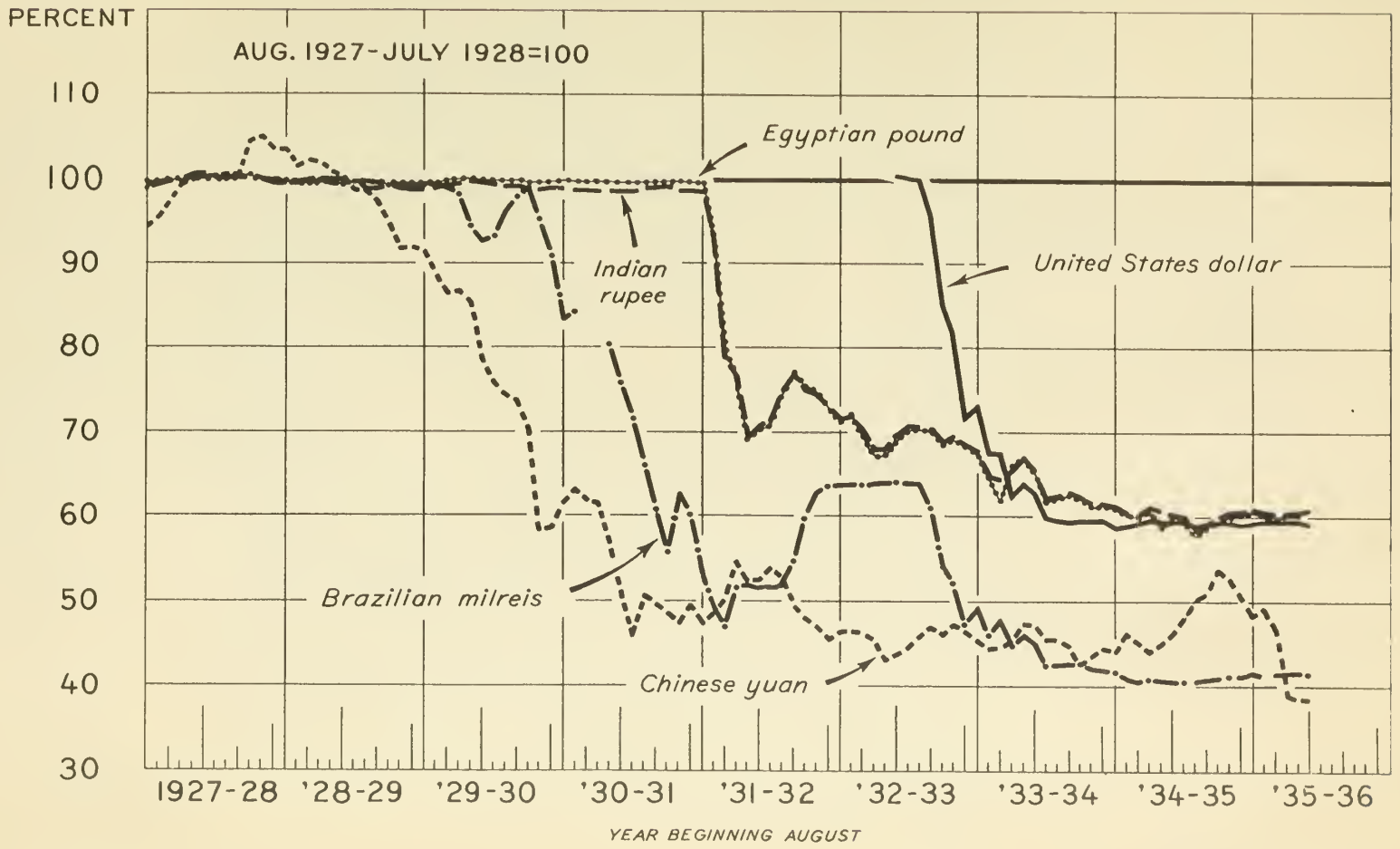

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FIGURE 4.- CURRENCIES IN OTHER IMPORTANT COTTON-PRODUCING COUNTRIES DEPRECIATED EARLIER THAN IN THE UNITED STATES, AND IN THE CASE OF BRAZIL AND CHINA DECLINED FURTHER. THIS TENDED TO PREVENT PRICES OF COTTON IN THE OTHER COTTON-EXPORTING COUNTRIES FROM DECLINING AS MUCH AS COTTON PRICES IN THIS COUNTRY. THE GOLD VALUE OF THE BRAZILIAN MILREIS, INDICATED ABOVE, SHOWS LESS THAN THE REAL DECLINE IN THE MILREIS AS IT AFFECTED COTTON PRICES IN BRAZIL, BECAUSE OF BRAZILIAN CURRENCY REGULATIONS.